INDEX.

PAGE

Algar, H.—

Letter on Mrs. Quickly's "Table of Green Fields" 88

Animal Products, Some Peculiar—

By R. Lydekker 252

Antarctic Exploration—

By Wm. Shackleton 121

Antoniadi, E. M., F.R.A.S.—

Nova Persei 250

Arctic Animals turn White, How—

By R. Lydekker 172

Bacon, Rev. John M., F.R.A.S.—

Exploring the Thunder Cloud 49

On the Capricious Hearing of Certain Sounds at Long Range 193

Beilby, Ernest L.—

Letter on Constellation Studies 109

Bell, Arthur H.—

Rainfall in South Africa 54

The Mechanism of a Sunset 235

The Alchemy of Hoar-Frost 258

Bird-love in Winter—

By Charles A. Witchell 8

Books, Reviews of—

Amphibia and Reptiles (The Cambridge Natural History). By Hans Gadow, M.A., F.R.S. ... 255

Asklepios; The Temples and Ritual of, at Epidauros and Athens. By Richard Caton, M.D. ... 110

Astral Gravitation in Natural Phenomena, Essays in Illustration of the action of. By William Leighton Jordan 41

Astronomischer Jahresbericht. Edited by Walter F. Wislicenus 233

Astronomy, Primer of. By Sir Robert Ball ... 111

Astronomy, A Text-book of. By Prof. G. C. Comstock 278

Atmospheric Radiation. By Prof. Frank W. Very 15

Bird Watching. By Edmund Selous 280

Birds of Siberia, The. By Henry Seebohm ... 184

PAGE

Book Circular, Williams & Norgate's 17

Botany, An Elementary Text for Schools. By L. H. Bailey 87

Botany, Handbook of Practical. By Dr. E. Strasburger 111

Botany, Irish Topographical. By Robert Lloyd Praeger 279

Botany, The Self-Educator in. By R. S. Wishart, M.A. 159

Calculus, The Elements of the Differential and Integral. By J. W. A. Young and C. E. Linebarger 134

Child, The, a Study in the Evolution of Man. By A. F. Chamberlain, M.A., PH.D. 87

Crocodilians, Lizards, and Snakes of North America, The. By Prof. E. D. Cope 206

Crustacea, The Stalk-eyed, of British Guiana, West Indies and Bermuda. By Charles G. Young, M.A., M.D., M.R.I.A. 254

Darwinism, The Elements of. By A. J. Ogilvy ... 184

Deschanel's Natural Philosophy—Part III. Electricity. By Prof. J. D. Everett 185

Design in Nature's Story. By Dr. W. Kidd ... 64

Dragons of the Air; An Account of Extinct Flying Reptiles. By H. G. Seeley 279

Englishwoman's Year Book and Directory, 1901, The. Edited by Emily Janes 42

Evolution, Problems of. By F. W. Headley ... 41

Faraday, Michael; His Life and Work. By Prof. S. P. Thompson, F.R.S. 110

Harlequin Fly, The Structure and Life History of the. By Prof. L. C. Miall, F.R.S., and A. R. Hammond 110

Heat, What is? and What is Electricity? By Frederick Hovenden 134

Heavens, The Romance of the. By Prof. A. W. Bickerton 160

Imitation; or the Mimetic Force in Nature and Human Nature. By Richard Steel 111

Invention in the Nineteenth Century, The Progress of. By Edward W. Byron 110

Inventions, Twentieth Century: A Forecast. By George Sutherland, M.A. 206

Keats, The Complete Works of John. Edited by H. Buxton Forman 111

Kite Observations, Report of the, of 1898. By the Department of Agriculture, U.S.A. 16

Knowledge Diary and Scientific Handbook for 1902 280

Land and Sky. By the Rev. John M. Bacon ... 64

Legislation, Journal of the Society of Comparative 111

Lick Observatory, Publications of the 42

Lilford, Lord (Thomas Littleton, Fourth Baron). A Memoir by His Sister 41

Magnetism and Electricity, The Principles of. By P. L. Gray, B.SC. 134

Man 42

Mathematics, Elementary Practical. By M. T. Ormsby 184

Dec. 30, 36 Edink

683994

XUM

PAGE

Books, Reviews of—

Mechanical and Physical Subjects, Papers on. By Prof. Osborne Reynolds, F.R.S. 205
Mediterranean Race, The. By Prof. G. Sergi ... 207
Microscope and its Revelations, The. Edited by Rev. W. H. Dallinger, F.R.S. 206
Microscope, One Thousand Objects for the. By Dr. M. C. Cooke 110
Nature, A Year with. By W. Percival Westell ... 64
Nineteenth Century Science, The Story of. By H. S. Williams 65
Norwegian North Polar Expedition, 1893-6. Scientific Results. Vol. III. Edited by Fridtjof Nansen 183
Observatory, Lowell, Annals of the 17
Observatory, Paris, Annual Report of the ... 17
Observatory, The Royal, Greenwich. By E. W. Maunder 16
Photograms of the Year 1900 16
Physics, Practical, Advanced Exercises in. By Prof. Arthur Schuster, PH.D., F.R.S., and C. H. Lees, D.SC.... 159
Plant Studies. By John M. Coulter, PH.D. ... 233
Plants, Disease in. By H. Marshall Ward, SC.D., F.R.S. 206
Plants, Fossil, Studies in. By Dukinfield Henry Scott 16
Plants, Poisonous, in Field and Garden. By Rev. Prof. G. Henslow 233
Railway Runs in Three Continents. By J. T. Burton Alexander 111
Science, A Manual of Elementary. By R. A. Gregory and A. T. Simmons 159
Selborne, The Natural History and Antiquities of. By Gilbert White. Edited by L. C. Miall and W. Warde Fowler 256
Sex, The Evolution of. By Prof. Patrick Geddes and J. Arthur Thomson 280
Shells, Our Country's, and How to Know Them: A Guide to the British Mollusca. By W. J. Gordon 280
Smithsonian Institution, Annual Report of the, for the Year ending June 30th, 1898 205
Species, Origin of. By Charles Darwin 42
Spermatophytes, Morphology of. By J. M. Coulter, PH.D., and C. J. Chamberlain, PH.D. 183
Star Atlas, with Explanatory Text. By Dr. Hermann J. Klein. Edited by Edmund McClure, M.A. ... 232
Starches, The Microscopy of the More Commonly Occurring. By Prof. Hugh Galt, M.B., C.M., D.P.H. 160
Studies; Scientific and Social. By Alfred Russel Wallace 42
Sun, The Path of the. By William Sandeman ... 17
Universe, The Riddle of the. By Ernst Haeckel ... 15
Use-Inheritance; Illustrated by the Direction of Hair on the Bodies of Animals. By Walter Kidd, F.Z.S. 278
What is Life? By F. Hovenden 65
White, Gilbert, of Selborne, The Life and Letters of. By Rashleigh Holt-White 255
Who's Who, 1901 42
Words in Reasoning, The Use of. By Alfred Sidgwick 206
Zoology, Agricultural. By Dr. J. Ritzema Bos ... 111
Zoology. An Elementary Text-book. By A. E. Shipley and E. W. MacBride 279
Zoology, A Text-book of, treated from a Biological Standpoint. By Dr. O. Schmeil 87
Zoology, A Treatise on; Part IV. Platyhelmia, Mesozoa, and Nemertini. By W. B. Benham ... 280

PAGE

Brown, Robert, Junr., F.S.A.—

Constellation-Figures as Greek Coin-Types... 35

Carcinology, Current—

By Rev. T. R. R. STEBBING 209

Carpenter, Geo. H., B.Sc.(Lond.)—

The Insects of the Sea—
Bristle-Tails 19
Spring-Tails 51
Beetles 114, 161
Flies 194
Four-winged Flies and Bugs 245

Chess Column—

By C. D. LOCOCK ... 24, 47, 71, 95, 119, 143, 168, 191, 215, 240, 263, 287

Christopher, H.—

Letter on The Nebular Hypothesis 89

Climate, Gradual Change in our—

Letter on; by ALEX. B. MACDOWALL... ... 39

Cobbold, Paul A.—

Letter on Rainbow Phenomena 40

Cole, Grenville A. J., M.R.I.A., F.G.S.—

Round Fair Head 198

Comet, The Great Southern (1901—I.)—

By W. F. DENNING 201

Comets and Meteors, Notes on—

By W. F. DENNING ... 23, 46, 70, 94, 118, 142, 166, 190, 214, 238, 262, 286

Constellation-Figures as Greek Coin-Types—

By ROBERT BROWN, JUNR. 35

Constellation Studies—

By E. WALTER MAUNDER—
I. The North Circumpolar Stars .. 12
II. The Region of Leo 33
III. The Region of Virgo 57
IV. Bootes and Hercules 85
V. The Scorpion and the Serpent-Holder 105
VI. The Swan and the Eagle 128
VII. The South Circumpolar Stars ... 152
VIII. The Archer and the Water-bearer ... 178
IX. The Sea-Monster and the Flood ... 228
X. The Royal Family 248
XI. The Ram and the Bull 273

PAGE

Constellation Studies—
Letter on ; by Ernest L. Beilby 109

Cooke, John H., F.L.S., F.G.S., etc.—
Prehistoric Man in the Central Mediterranean 91

Cornish, Vaughan, D.Sc.(Vict.), F.C.S., F.R.G.S.—
The Size of Ocean Waves ... 1, 55, 97, 145

Cortie, Rev. A. L., S.J., F.R.A.S.—
The Types of Sun-Spot Disturbances ... 104
New Stars 130

Coulton, John James—
Letter on Mrs. Quickly's "Table of Green Fields" 89

Cowell, P. H.—
Prof. Adams' Lectures on the Lunar Theory 154

Cox, A. H. Machell, M.A.—
The Stronghold of the Nuthatch 101

Crommelin, A. C. D.—
Total Solar Eclipses of the Twentieth Century 59

Cross, M. I.—
Microscopy 22, 45, 69, 93, 117, 141, 165, 189, 213, 237, 260, 285

Davison, Charles, Sc.D., F.G.S.—
The Progress of Seismology during the Nineteenth Century 44
On the Audibility of the Minute-Guns fired at Spithead on February 1st 124
The Sinking of Large Stones through the Action of Worms 241

Dead Sea, The Water of the—
By C. Ainsworth Mitchell 259

Denning, W. F., F.R.A.S.—
Notes on Comets and Meteors 23, 46, 70, 94, 118, 142, 166, 190, 214, 238, 262, 286
The Great Southern Comet (1901, I.) ... 201
The Real Paths of Fireballs and Shooting Stars 271

Earthquake, The Inverness—
Note on 257

PAGE

Eclipse, The Total Solar, of May 18, 1901—
By E. Walter Maunder 225

Eclipses, Total Solar, of the Twentieth Century—
By A. C. D. Crommelin 59

Editorial 265

Electrograph, A Curious—
Letter on ; by William Godden 89

Elvins, A.—
Letter on Sunspots and Light 232

Fair Head, Round—
By Grenville A. J. Cole 198

Finger-Prints as Evidences of Personal Identity—
By R. Lydekker 66

Finger-Prints, Human—
Letter on ; by W. H. S. Monck 90

Fireballs and Shooting Stars, The Real Paths of—
By W. F. Denning 271

Fotheringham, Rev. D. R., M.A.—
Mrs. Quickly's "Table of Green Fields" ... 31

Fowler, A., F.R.A.S.—
The Face of the Sky 23, 46, 71, 95, 119, 142, 167, 191, 215, 239, 262, 287
The New Star in Perseus 73

Godden, William—
Letter on A Curious Electrograph 89

Gore, J. E., F.R.A.S.—
The Brightness of Starlight 177

Gowers, Sir W. R., M.D., F.R.S.—
Letter on Sudden Blanching of Human Hair 231

Green, J. F., F.Z.S.—
Letter on Mothing in Suffolk... 231

Gregory, R. A.—
Letter on Clouds on Mars 133

PAGE

Hair, Plant-bearing—
By R. Lydekker 223

Hair, Sudden Blanching of Human—
Letter on; by Sir W. R. Gowers 231

Hand-Prints, Monkey—
By R. Lydekker 3

Hoar-Frost, The Alchemy of—
By Arthur H. Bell 258

Human Life Possible on other Planets, Is?—
Letter on; by Arnold D. Taylor 15
Letter on; by Thomas R. Waring 40
Letter on; by Arthur Ed. Mitchell ... 41
Letter on; by E. Lloyd Jones 90

Hydrogen, The Second Series of Lines in the Spectrum of—
By Edward C. Pickering 181

Ice Age, The—
Letter on; by W. H. S. Monck 158

Icebergs, Amongst Antarctic—
Letter on; by H. E. B. 251

Insects of the Sea, The—
By Geo. H. Carpenter.
Bristle-Tails 19
Spring-Tails 51
Beetles 114, 161
Flies 194
Four-winged Flies and Bugs 245

Jones, E. Lloyd—
Letter on Is Human Life possible on other Planets? 90
Letter on Clouds on Mars 133

Knight, Geo. McKenzie—
Letter on The Nebular Hypothesis 109
Letter on Sunspots and Terrestrial Temperature 133
Letter on A Triple Rainbow 231

Leonids, Photographic Search for—
Note on; by E. W. M. 15

PAGE

Lewis, R. T.—
Letter on Double Rainbow 204

Locock, C. D., B.A.—
Chess Column ... 24, 47, 71, 95, 119, 143, 168, 191, 215, 240, 263, 287

Lunar Atmosphere and Oceans—
Letter on; by J. O'May 182

Lunar Theory, Prof. Adams' Lectures on the—
By P. H. Cowell 154

Lydekker, R.—
Monkey Hand-Prints 3
Living Millstones 28
Finger-Prints as Evidences of Personal Identity 66
Four-Horned Sheep 150
How Arctic Animals turn White 172
Plant-Bearing Hair 223
Some Peculiar Animal Products 252
A Remarkable Mammal 269

McDonald, R. L.—
Letter on Sunset Phenomenon 63

MacDowall, Alex. B., M.A.—
Letter on Gradual Change in our Climate ... 39
Letter on Sunspots and Winters 156
Letter on Does the Moon affect Rainfall? ... 276

Mammal, A Remarkable—
By R. Lydekker 269

Markwick, Col. E. E.—
Letter on Sunset Phenomenon 88

Mars, Clouds on—
Letter on; by E. Lloyd Jones 133
Letter on; by R. A. Gregory 133
Letter on; by T. R. Waring 157

Mars, The Canals of—
By Miss M. A. Orr 38

Maunder, E. Walter, F.R.A.S.—
Constellation Studies—
I. The North Circumpolar Stars ... 12
II. The Region of Leo 33

PAGE

Maunder, E. Walter. F.R.A.S.—

Constellation Studies—

III. The Region of Virgo 57
IV. Bootes and Hercules 85
V. The Scorpion and the Serpent-Holder 105
VI. The Swan and the Eagle 128
VII. The South Circumpolar Stars ... 152
VIII. The Archer and the Water-Bearer ... 178
IX. The Sea-Monster and the Flood ... 228
X. The Royal Family 248
XI. The Ram and the Bull 273
Sunrise on the Sea of Plenty 61
Where Four Mountain Ranges Meet... ... 84
The Ringed Plains of the Mare Nubium ... 200
The Total Solar Eclipse of May 18th, 1901 225

Men and Microbes—

By E. Stenhouse 187

Meteor, Brilliant, in California—

Letter on; by S. D. Proctor 276

Microscopy—

Conducted by M. I. Cross 22, 45, 69, 93, 117, 141, 165, 189, 213, 237, 260, 285

Millstones, Living—

By R. Lydekker 28

Minute-Guns fired at Spithead on February 1st, On the Audibility of the—

By Charles Davison 124

Mitchell, Arthur Ed.—

Letter on Is Human Life Possible on other Planets? 41
Letter on The Distribution of the Stars in Space... 231

Mitchell, C. Ainsworth, B.A., F.I.C.—

The Water of the Dead Sea 259

Monck, W. H. S.—

Letter on Human Finger-prints 90
Letter on The Ice Age 157

Moon, The Orbit of the—

By Sir Samuel Wilks 156

(Moon), The Ringed Plains of the Mare Nubium—

By E. Walter Maunder 200

PAGE

(Moon), Where four Mountain Ranges meet—

By E. Walter Maunder 84

Mothing in Suffolk—

Letter on; by J. F. Green 231

Nebulæ, Photographs of the, ♃ V. 32 Orionis, ♃ IV. 2 Monocerotis, ♃ IV. 28 Corvi, and ♃ I. 139 (M. 61) Virginis—

By Dr. Isaac Roberts... 180

(Nebulæ), Photographs of the Clusters M. 35 and ♃ VI. 17 Geminorum, and of Nebulæ in Monoceros—

By Dr. Isaac Roberts 11

Nebular Hypothesis, The—

Letter on; by H. Christopher 89
Letter on; by Geo. McKenzie Knight ... 109
Letter on; by William Noble 109

Nile, The White—From Khartoum to Kawa—

An Ornithologist's Experiences in the Soudan.

By Harry F. Witherby—

I. The Desert Railway, Khartoum, and Omdurman 75
II. The River—Essential alike to Man, Beast and Bird 137
III. The Country and the People 174
IV. Camping and Collecting 220
V. Birds 248
VI. A Dance, a Sand-Storm, and a Rare Bird 266

Noble, William—

Letter on The Nebular Hypothesis 109

Noon, Determination of—

Letter on; by Wm. Davies 157

Nordenskjöld, Prof. Baron von—

Obituarial Notice of 230

Notes—

Astronomical 9, 32, 63, 82, 112, 132, 158, 185, 208, 234, 256, 277
Botanical 9, 32, 82, 112, 132, 158, 185, 208, 234, 257, 277
Entomological ... 10, 32, 63, 83, 132, 158, 186, 234, 257, 277
Zoological ... 10, 33, 64, 83, 113, 132, 158, 186, 209, 235, 257, 278
General 11, 83, 113, 186, 257

XUM

PAGE

Nuthatch, The Stronghold of the—

By A. H. Machell Cox 101

O'May, J.—

Lunar Atmosphere and Oceans 182

Ormerod, Eleanor A.—

Obituarial Notice of 207

Ornithological Notes, British—

Bustard, Attempt to re-introduce the Great, in Norfolk—T. Southwell 183
Bustard, Little, in Derbyshire—W. Storrs Fox ... 205
Butcher Bird, Mimicry by the—Charles A. Witchell 140
Buzzard, Honey, in Solway—Robert Service ... 117
Buzzard, the Honey, Supposed breeding of, in Somerset—W. P. Westell 205
Cuckoo, A Young, on Migration—Richard M. Barrington... 65
Dotterel, Early Appearance of, in Yorkshire—Philip W. Loten 90
Dotterels in Wales—O. V. Aplin 205
Falcon, Red-footed, in Shropshire—H. E. Forrest ... 183
Fulmar breeding at Cape Wrath—Howard Saunders 43
Godwit, Black-tailed, in Co. Wexford—G. E. H. Barrett-Hamilton 117
Goose, Lesser White-fronted, in Norfolk—F. Coburn 234
Grebe, Great-crested, An Observational Diary of the Habits of the—Edmund Selous 161
Gull, Ivory, in Northamptonshire—O. V. Aplin ... 205
Ibis, Glossy, in County Durham—T. H. Nelson ... 161
King-Eider in Co. Down—Robert Patterson ... 65
Kite, the Black, Occurrence of, at Aberdeen—George Sim 205
Martin, House, Winter Occurrence of, in Yorkshire—T. H. Nelson 91
Migration, Bird, in Great Britain and Ireland—H. F. W. 18
Migration of Birds in N.E. Lincolnshire—G. H. Caton Haigh 183
Moorhens, Hairy-plumaged—H. E. Forrest ... 117
Names of British Birds, The Origin and Meaning of—A. H. Meiklejohn 43
Nightjar, Early Appearance of the, in Hampshire—Harry F. Witherby 140
Nutcracker in Sussex—H. Marmaduke Langdale ... 117
Nutcracker in Yorkshire—W. Ruskin Butterfield ... 281
Ornithological Notes from Norfolk for 1900—J. H. Gurney 140
Ornithologists, Early—Rev. H. A. Macpherson ... 281
Owl, Scops, in Shetland—W. Eagle Clarke ... 117
Owl, Snowy, in Co. Donegal—Robert Patterson ... 65
Owl, Tawny, in Ireland—Robert Patterson ... 43, 90, 281
Owls, Long-Eared, as Anglers—Max Peacock ... 65
Pastor, Rose-coloured, in Kent—L. A. Curtis Edwards 183
Phalarope, Grey, in Lincolnshire—J. Conway Walter 65
"Photo-trapping" Birds—R. B. Lodge 233
Pipit, Red-throated, in Ireland—F. Coburn ... 204
Redpoll, Coues, in Barra—W. Eagle Clarke ... 205
Redstart, Nesting of the, in Shetland in 1901—Charles A. Sturrock 254
Riviera, Bird-Migration in the—J. H. Gurney ... 205
Sandpiper, Baird's, in Sussex 18
Sandpiper, Broad-billed, in Kent and in Sussex—L. A. Curtis Edwards and W. Ruskin Butterfield 281

PAGE

Sandpiper, Pectoral, at Aldeburgh—E. C. Arnold ... 19
Sandpiper, Pectoral, in Ireland—Howard Saunders 43
Sandpiper, Wood, in Co. Dublin—W. J. Williams... 254
Scotland, Report on the Movements and Occurrence of Birds in, during 1900—T. G. Laidlaw ... 205
Shearwater, Great, Notes on the—Howard Saunders 43
Shearwater, The Little Dusky *(Puffinus assimilis)*, in Sussex—Ruskin Butterfield 90
Shetland, Southern, On Some Migratory and other Birds observed in, in September, 1900—W. Eagle Clarke 43
Shrike's "Larder," The—H. F. W. 43
Starling or Nuthatch—Harry F. Witherby .. 160
Starlings, Nest of Young, in Winter—R. H. F. ... 43
Surrey, The Birds of—J. A. Bucknill 205
Swallows, Arrival of—E. Sillence ... 140
Swallows, Migrating—L. M. Sabine Pasley .. 281
Swift, Breeding Habits of the—Rev. F. C. R. Jourdain and Rev. Allan Ellison 234, 281
Tern, Lesser, Nesting at Barra—W. L. MacGillivray 254
Thrush, Song, Notes on the Singing of a—Charles A. Witchell 116
Thrush, Song, On the Winter Singing of the—W. Warde Fowler 183
Thrush, Song, The Migrations of the—H. F. W. ... 18
Thrush, Song, The Migration of the—E. Sillence ... 65
Tit, Willow *(Parus salicarius)*, British Form of the—H. F. W. 18
Tits, Blue, nesting in a Pump—W. C. Tetley ... 204
Wagtail, Blue-headed, Breeding of, in Sussex—W. Ruskin Butterfield 281
Wagtail, White, at Bartragh, Co. Mayo—Robert Warren 183
Wagtail, White, Notes on the, in the South-east of Scotland—William Evans 43
Warbler, Barred, in Barra—W. L. MacGillivray ... 117
Wigeon, Breeding of, in Ireland—Robert Patterson... 183
Wigeon, Breeding of, in Ireland—John Cottney ... 205
Wren, Willow, Nesting of the, in Shetland in 1901—Charles A. Sturrock 254
Wryneck calling in August and September—Basil T. Rowsell 254
Yellow Hammer, Red-faced Variety of the—H. F. W. 182
Yorkshire, The Birds of 19

Orr, Miss M. A.—

The Canals of Mars 38

Ostracoda, Giant: Old and New—

By Rev. Thomas R. R. Stebbing 100

Peek, Sir Cuthbert E., Bart., M.A., F.S.A.—

Obituarial Notice of 208

Persei, Nova—

By E. M. Antoniadi 250
Letter on; by A. Stanley Williams ... 204

Persei, Nova, The Stars near—

By A. Stanley Williams 152

Perseus, The New Star in—

By A. Fowler 107

PAGE

Photography "in Natural Colours" by the McDonough-Joly Process—

By H. Snowden Ward 6

Pickering, Edward C.—

The Second Series of Lines in the Spectrum of Hydrogen... 181

Plants, Flowering—

With Illustrations from British Wild-flowers.

By R. Lloyd Praeger—

I. Roots and Stems.. 25
II. Concerning Leaves 79
III. Flowers 125
IV. Flowers and Fruit 169
V. Dispersal and Distribution 217
VI. The Vegetation of Ireland 281

Polar Exploration—

Note on 186

Praeger, R. Lloyd, B.A.—

Flowering Plants. With Illustrations from British Wild-flowers—

I. Roots and Stems 25
II. Concerning Leaves 79
III. Flowers 125
IV. Flowers and Fruits 169
V. Dispersal and Distribution 217
VI. The Vegetation of Ireland 281

Pre-historic Man in the Central Mediterranean—

By John H. Cooke 91

Proctor, S. D.—

Letter on Brilliant Meteor in California .. 276

Quensel, Percy T. F. K.—

Letter on Sunspots and Terrestrial Temperature 108

Quickly's, Mrs., "Table of Green Fields"—

By Rev. D. R. Fotheringham 31
Letter on; by H. Algar 88
Letter on; by John James Coulton ... 89

Rainbow, A Triple—

Letter on; by G. McKenzie Knight ... 231

Rainbow, Double—

Letter on; by R. T. Lewis 204

PAGE

Rainbow Phenomena—

Letter on; by Paul A. Cobbold 40

Rainfall? Does the Moon affect—

Letter on; by Alex. B. MacDowall ... 276

Rainfall in South Africa—

By Arthur H. Bell 54

Roberts, Isaac, D.Sc., F.R.S.—

Photographs of the Clusters M. 35 and H VI. 17 Geminorum, and of Nebulæ in Monoceros 11
Photographs of the Nebulæ H V. 32 Orionis, H IV. 2 Monocerotis, H IV. 28 Corvi, and H I. 139 (M. 61) Virginis... 180

Sandeman, Wm.—

Letter on The Path of the Sun 62

Sea of Plenty, Sunrise on the—

By E. Walter Maunder 61

Seismology, The Progress of, during the Nineteenth Century—

By Charles Davison 44

Shackleton, Wm., F.R.A.S.—

Antarctic Exploration 121

Sheep, Four-horned—

By R. Lydekker 150

Silver, Standard: Its History, Properties, and Uses—

By Ernest A. Smith 102, 134, 163

Sky, The Face of the—

By A. Fowler ... 23, 46, 71, 95, 119, 142, 167, 191, 215, 239, 262, 287

Smith, Ernest A., Assoc.R.S.M., F.C.S.—

Standard Silver: Its History, Properties and Uses 102, 134, 163

Sounds, On the Capricious Hearing of Certain, at Long Range—

By Rev. John M. Bacon 193

Speeds, The Relative, of Some Common Birds—

By Charles A. Witchell 149

Starlight, The Brightness of—

By J. E. Gore 177

XUM

PAGE

Stars, New—
By the Rev. A. L. Cortie 130

Stars, The Distribution of the, in Space—
Letter on; by Arthur Ed. Mitchell ... 231

Stebbing, Rev. Thomas R. R., M.A., F.R.S., F.L.S.—
Giant Ostracoda: Old and New 100
Current Carcinology 209

Stellar Parallax—
Letter on; by W. W. Strickland 133

Stenhouse, E., A.R.C.S., B.Sc.—
Men and Microbes 187

Strickland, W. W.—
Letter on Stellar Parallax 133

Sun, Constituents of the—
Note on; by E. W. M. 15

Sun, The Path of the—
Letter on; by Wm. Sandeman 62

Sunset Phenomenon—
Letter on; by R. L. McDonald 63
Letter on; by E. E. Markwick 88

Sunset, The Mechanism of a—
By Arthur H. Bell 235

Sun-Spot Disturbances, The Types of—
By the Rev. A. L. Cortie 104

Sunspots and Light—
Letter on; by A. Elvins 232

Sunspots and Terrestrial Temperature—
Letter on; by Percy T. F. K. Quensel ... 108
Letter on; by G. McKenzie Knight ... 133

Sunspots and Winters—
Letter on; by Alex. B. MacDowall 156

PAGE

Taylor, Rev. Arnold D.—
Letter on Is Human Life Possible on other Planets? 15

Thunder Cloud, Exploring the—
By the Rev. John M. Bacon 49

Ward, H. Snowden, F.R.P.S.—
Photography "in Natural Colours" by the McDonough-Joly Process 6

Waring, Thomas R.—
Letter on Is Human Life Possible on other Planets? 40
Letter on Clouds on Mars 157

Waves, The Size of Ocean—
By Vaughan Cornish 1, 55, 97, 145

Wilks, Sir Samuel, Bart., M.D., LL.D., F.R.S.—
Letter on The Orbit of the Moon 156

Williams, A. Stanley—
The Stars near Nova Persei 152
Letter on Nova Persei 204

Witchell, Charles A.—
Bird-love in Winter 8
The Relative Speeds of Some Common Birds 149

Witherby, Harry F., F.Z.S., M.B.O.U.—
The White Nile—From Khartoum to Kawa—
I. The Desert Railway, Khartoum, and Omdurman 75
II. The River—Essential alike to Man, Beast, and Bird 137
III. The Country and the People 174
IV. Camping and Collecting 220
V. Birds 243
VI. A Dance, a Sandstorm, and a Rare Bird 266

Worms, The Sinking of Large Stones through the Action of—
By Charles Davison 241

INDEX OF THE PRINCIPAL ILLUSTRATIONS.

PAGE

Antarctic Ship "Discovery" at Dundee 122

Aye-Aye, The (full-page Photographic Plate) 270

Comet, The Great Southern (1901, I.) 202
Ditto, Orbit of, and of the Earth 203

Constellation-Figures as Greek Coin-Types (full-page Photographic Plate) 36

Corona of 1901, May 18 (full-page Photographic Plate) 226

Crustacea—
Leptodora kindtii (Focke) ... 211
Ptychogaster formosus (A. Milne-Edwards)... 212

Eclipse, The Total Solar, of May 18, 1901—
Mr. Claxton's Station and Mr. Maunder's Station 226
Our Military Helpers 227
Photograph of the Partial Phase .. 227

Eclipses, Total Solar—
Diagram showing the tracks of all that cross Europe during the Twentieth Century 60

Electrograph, A Curious 89

Finger-Prints 67

Fireballs—
Diagram showing the paths of ... 280

Four-horned Ram 151

Hand-Prints, Monkey—
Right Palmar Imprint of a Macaque Monkey 4
Right Palmar Impressions of a Capuchin Monkey and of a Marmoset 4
Right Palmar Impressions of a Spider Monkey and of a Red-fronted Lemur 5

Insects of the Sea, The—
Machilis maritima, Leach. A Bristle-tail 20
Isotoma maritima, *I. schötti*, and *I. Beselsii* 52
Xenylla humicola and *Anurida maritima* 53

PAGE

Early embryo of Anurida... ... 54
Actocharis Readingii and *Cafius fucicola* 115
Phytosus nigriventris and *Phytosus balticus* 116
Grub of *Diglotta mersa* 161
Micralymma brevipenne, grub and pupa 161
Cillenus lateralis 162
Grub of *Aepus marinus* and *Aepus Robinii* 163
Coelopa pilipes and *Orygma luctuosa* 195
Glenanthe ripicola and *Chersodromia arenaria*... 195
Aphrosylus raptor, Male and grub 196
Clunio marinus, male, female, and larva 197
Eretmoptera Brownii and *Halirytus amphibius* 198
Aepophilus Bonnairei (male), and *Hermatobates Haddonii* (male) 246
Trochopus plumbeus (female), and *Halobates regalis* (male) ... 247

Mars, Oppositions of 47

Microscopes, Diagrams of ... 165, 166

Millstones, Living—
Dental plates of an Eagle-ray and a Palæozoic Shark 28
Crushing teeth of an Enamel-scaled Fish 28
Upper teeth of Beaked Ray .. 29
Upper dentition of the Port Jackson Shark 30
Tooth of the Ridge-toothed Ray .. 30

(Moon), Sunrise on the Sea of Plenty (full-page Photographic Plate) ... 62

(Moon), The Ringed Plains of the Mare Nubium (full-page Photographic Plate) 201

(Moon), Where Four Mountain Ranges meet (full-page Photographic Plate) 84

Nebulæ in Monoceros (full-page Photographic Plate by Dr. Isaac Roberts) 11

(Nebulæ), Clusters M. 35 and ♅ VI. 17 Geminorum (full-page Photographic Plate by Dr. Isaac Roberts) 11

Nebulæ—
♅ V.32 Orionis, ♅ IV.2 Monocerotis, ♅ IV. 28 Corvi, M. 61 Virginis (Photographic Plate by Dr. Isaac Roberts) 180

PAGE

Nile, The White. From Khartoum to Kawa—
A Sakieh 76
The River Bank, Omdurman ... 77
The "Bazaar" at Khartoum ... 77
The Ruins of the Mahdi's Tomb... 78
Mahomet at Work 137
Sketch-Map showing route ... 138
Boatbuilding on the White Nile ... 139
A Midday Halt 139
Building a Square Brick Hut ... 175
A Dome-shaped Hut 175
A Native Loom 176
A Movable Hut 176
Camps at Duem and Gerasi ... 222
Bleeding Mahomet 244
The Cup fixed on the Neck ... 245
The Wreck of a Tent 267

Observatory, Royal Alfred, at Mauritius 225

Persei, Nova, and Procyon, Photographs of the Spectra of (full-page Photographic Plate 130

Persei, Nova, and Surrounding Stars (full-page Photographic Plate) ... 152

Persei, Nova, Images of Ordinary Star and the 251

Persei, Nova, Photographic Images of (full-page Photographic Plate) 250

Perseus, The New Star in, Charts of 73, 75

Plants, Flowering—
Winter leaf-rosette of the Sea-Stork's-bill 80
Winter leaf-rosette of the Hemlock Stork's-bill 81
Wind-fertilized plants (*Typha latifolia* and *Glyceria aquatica*) 126
Insect-fertilized plants (*Convolvulus* and *Angelica*) 127
Wild Angelica and Ox-eye Daisies 170
The Bloody Crane's-bill 217
Gregarious Plants—Winter Heliotrope, Ramsons and Ivy ... 219
Sketch-Maps Showing Distribution of Plants in Ireland 284
Wild Arbutus at the Upper Lake, Killarney 284

Sky, The Midnight, for London—
January 5, 1901 14
February 5, 1901 35
March 7, 1901 59
April, 1901 87

PAGE

Sky, The Midnight, for London—
May 6, 1901 107
June 2, 1901 130
July 1, 1901 154
August 5, 1901 180
October 4, 1901 230
November 6, 1901 250
December 3, 1901 275

Star Maps—
No. 1.—North Circumpolar Region 13
No. 2.—The Region of Leo ... 34
No. 3.—The Region of Virgo ... 58
No. 4.—The Region of Bootes and Hercules 86
No. 5.—The Region of Scorpio ... 106
No. 6.—The Region of Cygnus ... 129
No. 7.—The South Circumpolar Stars 153
No. 8.—The Region of the Archer and the Water-bearer 179
No. 9.—The Region of the Sea-Monster and the Flood 229
No. 10.—The Region of the Royal Family 249
No. 11.—The Region of the Ram and the Bull 274

Stone, Instrument for Measuring the Movement of a 242

Sunspot Group, Life-History of a (full-page Plate) 104

Waves, Diagrams of ... 146, 147, 148